

AMENDMENTS TO THE DRAWINGS:

The replacement sheet in the Appendix includes changes to Figures 3-5. In Figures 3-5, the previously omitted designation "Prior Art" has been added.

REMARKS

The specification and drawings have been amended to make editorial changes therein.

Claims 1-10 were rejected under §112, second paragraph, and have been replaced with new claims 11-17 that are believed to be proper as to form. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-10 were rejected as anticipated by MANSSON et al. 5,509,863. The new claims avoid this rejection and reconsideration and withdrawal of the rejection are respectfully requested.

New claim 11 defines a drive unit for a boat, that includes (element numbers are added by way of explanation only) a rigid housing (5), a transmission with first and second coaxial bevel gears (6, 7) mounted opposite one another on an engine shaft (2) inside the housing, where the first and second bevel gears engage a third bevel gear (8) fitted to a further shaft (3) that extends from the housing orthogonal to the engine shaft, first and second clutches (11) that each engages a respective one of the first and second bevel gears with the engine shaft, where the first and second clutches are each inside a respective one of the first and second bevel gears, and plural bearings (4, 9, 10) that mount the engine shaft and the first and second bevel gears on the housing so as to discharge reaction forces to the housing.

One of the features of the invention of claim 11 is that the forces developed during operation are discharged to the rigid housing, rather than to a movable part as found in the prior art. The forces developed during operation can be very high and if the bearings for transmitting these forces are mounted on a moving part, the moving part must be made stronger and heavier to resist such forces. In contrast to what is claimed herein, MANSSON et al. disclose that the bearings 9, 10 are mounted on a movable part, namely a shaft. The bevel gears 7, 8 of MANSSON et al. are mounted on intermediate shaft 4 by means of bearings 9, 10 (column 2, lines 34-39). Accordingly, the new claims avoid the rejection under §102.

By way of further explanation, when the clutch of MANSSON et al. engages the bevel gear with the shaft 4, the relevant bearing does not rotate. This means that the forces discharged on the bearing (it may be several tons) are applied to the same point on the same roller of the bearing. As a consequence, there is some local deformation of the bearing and the life of the component is reduced. By contrast, in the present invention when we engage the clutch, the relevant bearing starts to rotate together with the engine shaft, but since the engine shaft is mounted on bearings 9, 10 that are mounted on a fixed structure (the housing), these bearings rotate and avoid the problems of the prior art.

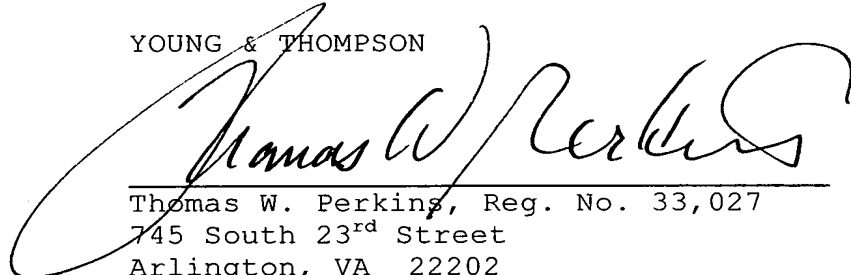
Claim 17 further avoids the rejection under §102 because MANSSON et al. do not disclose that the first and second clutches are each mounted on the engine shaft. In MANSSON et al., the clutches are mounted on an intermediate shaft as this facilitates the provision of oil to the clutch.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

A large, stylized handwritten signature in black ink, which appears to read "Thomas W. Perkins". The signature is written over a horizontal line.

Thomas W. Perkins, Reg. No. 33,027
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

TWP/lk

APPENDIX:

The Appendix includes the following item:

- a Replacement Sheet for Figures 3-5 of the drawings